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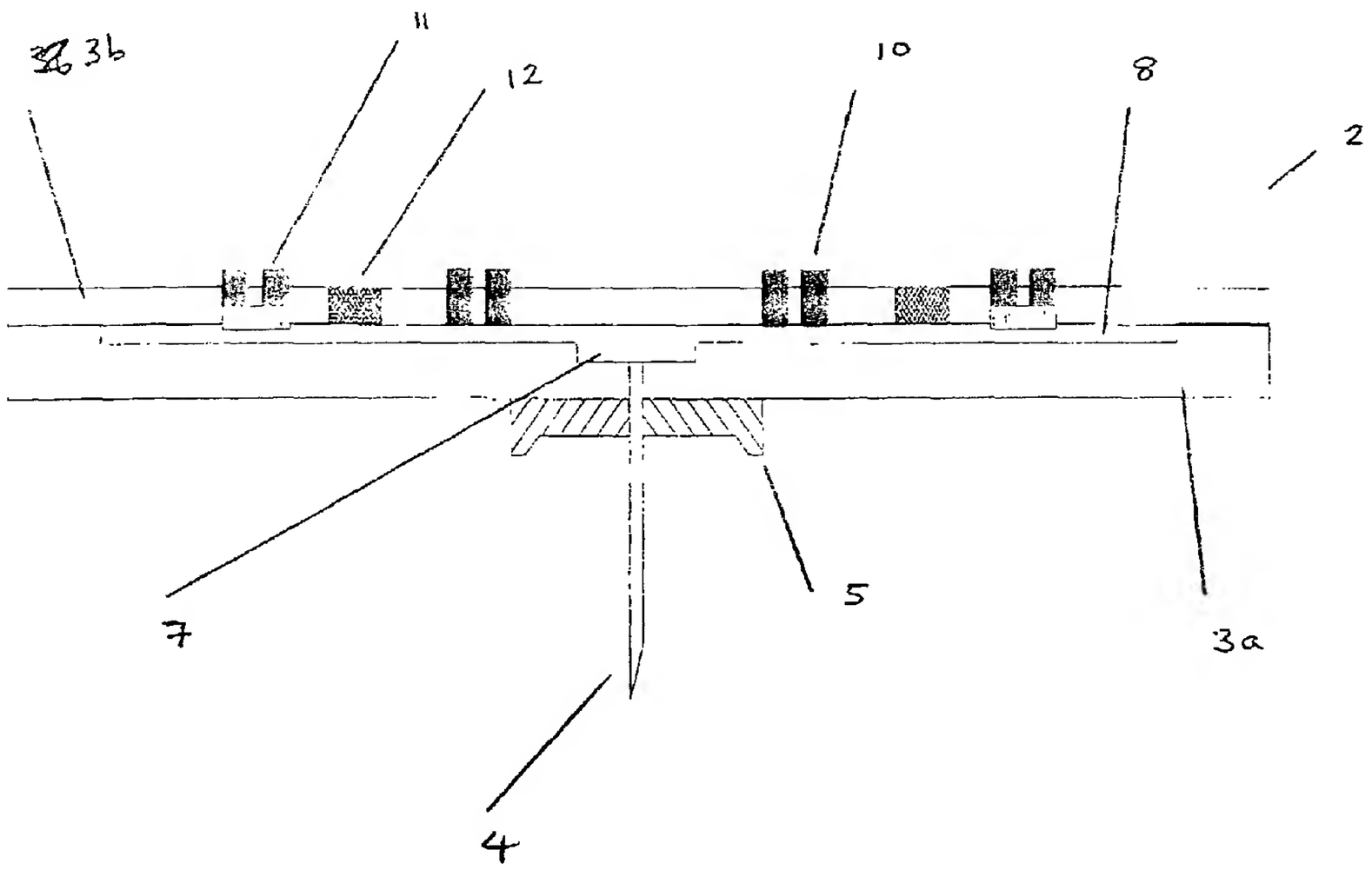

(57) Abstract: A glucose sensor in the form of a skin patch (2) has a microneedle (4) which painlessly penetrates the skin to draw out interstitial fluid. The interstitial fluid passes to a common entrance port (7). A series of microchannels (8) is provided on the skin patch. The fluid drawn onto the patch is selectively switched between a number of microchannels (8) by means of electro-osmotic pumps (10) and hydrophobic gates (12). Each microchannel (8) has an electrochemical detector (11) for sensing glucose concentration. Also disclosed is a monolithic device with an integrated lance (83).

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